



Minnesota Questions Tool (MQT) User Guide 2021–22

DIVISION OF ACADEMIC STANDARDS, INSTRUCTION AND ASSESSMENT

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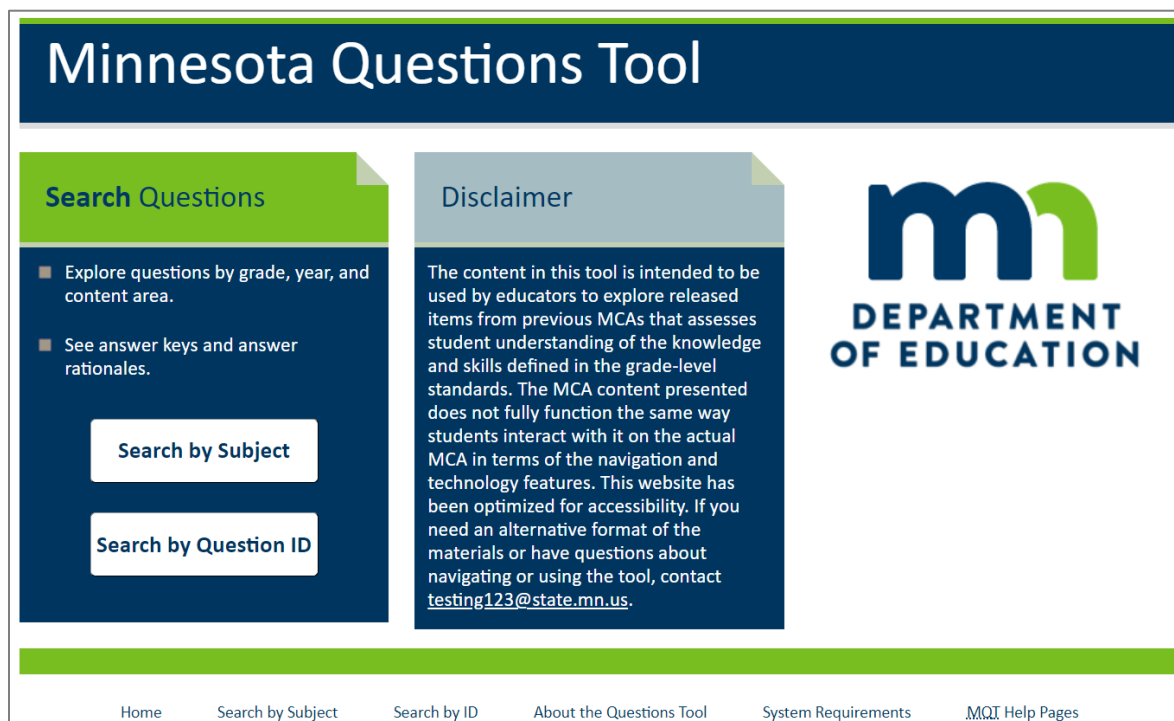
About the Minnesota Questions Tool (MQT)

The Minnesota Questions Tool (MQT) are publicly accessible released questions from past Minnesota Comprehensive Assessments (MCAs) across all MCA subjects (mathematics, reading, and science) and grade levels. The MQT includes sample questions for Science MCA IV in grades 5, 8, and HS.

This user guide provides detailed information about the MQT. If you have questions about navigating or using the tool, contact testing123@state.mn.us.

Accessing the MQT

The MQT is publicly available on the [MDE Testing 1, 2, 3](https://testing123.education.mn.gov) webpage (testing123.education.mn.gov > Assess > Minnesota Questions Tool).



Purpose of the MQT

The purpose of the MQT is to provide access to released MCA questions from past years' assessments to the general public. Many factors are considered when deciding which questions to release, including ensuring that all released questions have been shown to accurately measure student knowledge and skills from the standards. The year listed with each question is the year in which it was released to the public.

Each released question is aligned to the standards and grade level for each subject assessed, but is not representative of student mastery of the full standard and corresponding benchmarks. The academic standards provide the foundation for the assessments. Some concepts in the academic standards can only be assessed in the classroom and not on a standardized statewide assessment.

Overview of the MQT

Minnesota's academic standards and MCA test questions are developed by committees of educators and community members to ensure all test content is aligned to the standards for each grade level, culturally affirming, fair, and representative of the rich diversity of Minnesota students.

The released questions in the MQT are provided as:

- Examples of questions that probe students' skills and knowledge of a specific content area in different ways.
- A way to see how our students have performed on the question.

In order to maintain test security and ensure validity of results, a certain number of questions must be kept secure and are not released for public use. The released questions in this tool do not represent a complete assessment that meets the blueprint outlined in the test specifications, including the range of cognitive skills assessed and difficulty level. These questions are not intended to be used as practice tests for future MCA assessments. Rather, they are intended to support educators in understanding how the academic standards are assessed on the MCA, to help identify student misconceptions, and to provide examples of questions that assess student understanding at different DOK (Depth of Knowledge) levels.

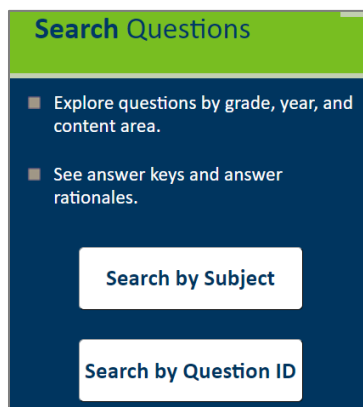
Cognitive complexity refers to the cognitive demand associated with a question or task. The level of cognitive demand is dependent upon the number of cognitive processes taking place in the mind of the learner when determining the correct answer to a question or task (e.g., recalling a basic fact versus synthesizing across multiple sources or applying knowledge in a unique situation). Levels of cognitive complexity for the MCA are based on Norman L. Webb's Depth of Knowledge levels. A DOK level of I, II, or III is assigned to each question. Cognitive complexity is different than the difficulty of a question, which is based on the inherent nature of the standard or benchmark topic, not the mental processes taking place in the mind of the learner. A question asking students to remember an obscure fact or definition can be considered difficult but still be classified as a DOK level 1.

Each test question in the MQT includes a rationale, which provides justification for the correct answer and explains why all other options are incorrect. Additionally, the incorrect option rationales explain why the student may have decided to select the incorrect answer. This data can be helpful to teachers in planning to identify student misconceptions and to students in helping them learn from their mistakes.

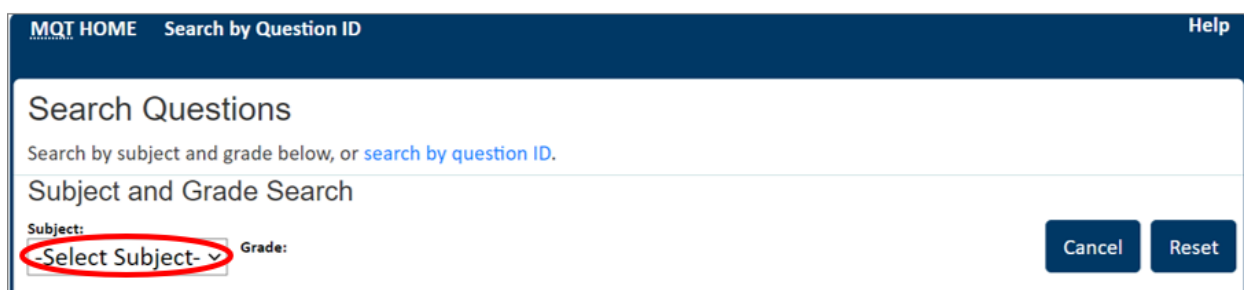
The data in the MQT shows the percent of students who answered a particular question correctly and the percent of students who selected each incorrect option. This can be helpful for identifying student misconceptions. For example, if many students chose an incorrect option, it may be useful to closely review the incorrect options and their rationales to identify why students were led to the incorrect option. This information can be used to help teachers address the misconception when planning for classroom instruction, or the question can be shown as an example to students.

Search MQT Questions

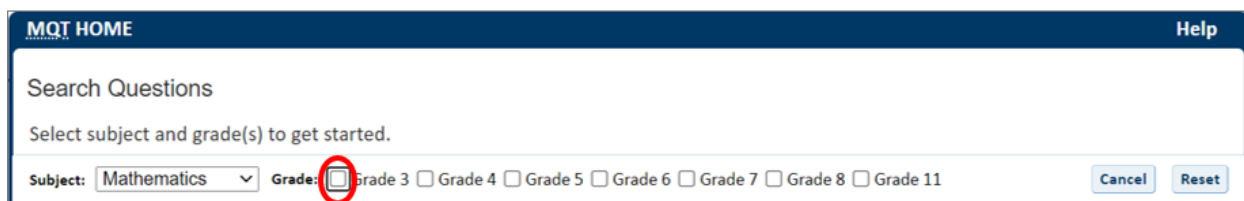
To find released questions, begin by setting your search criteria. You can search by subject or by question ID.



1. To search by subject, select the subject area from the **Subject** dropdown menu.

The interface shows the "MQT HOME" header with "Search by Question ID" and a "Help" link. The main heading is "Search Questions" with a subtext "Search by subject and grade below, or [search by question ID](#)." Below this is the "Subject and Grade Search" section. It features a "Subject:" label, a dropdown menu with "Select Subject" (circled in red), and a "Grade:" label. To the right are "Cancel" and "Reset" buttons.

2. Based on your **Subject** selection, available grade selections will appear to the right. Select a **Grade** by checking the box next to one or more grades.

The interface shows the "MQT HOME" header with "Search Questions" and a "Help" link. The main heading is "Search Questions" with a subtext "Select subject and grade(s) to get started." Below this is the "Subject: Mathematics" dropdown and a "Grade:" section. The "Grade:" section has a red circle around the first checkbox, followed by checkboxes for "Grade 3", "Grade 4", "Grade 5", "Grade 6", "Grade 7", "Grade 8", and "Grade 11". To the right are "Cancel" and "Reset" buttons.

3. You can narrow your search using the following filters.
 - **Strand or Substrand:** The strands/substrands for the subject chosen.
 - **Question Types:** The type of questions available for that subject/grade.
 - **DOK (Depth of Knowledge) Levels:** Levels of cognitive complexity for the MCA are based on Norman L. Webb's Depth of Knowledge levels. A DOK level of I, II, or III is assigned to each question. More information on DOKs can be found on the [MDE Testing 1, 2, 3](#) webpage under General Resources.
 - **Years:** The years the questions were released.

Note: At any point, you can select **Get Question Count** to determine the number of questions your search criteria will generate.

The screenshot shows the 'MQT HOME Search by Question ID' interface. The 'Subject' dropdown is set to 'Mathematics'. Under 'Grade', 'Grade 3' is selected. The 'Get Question Count' button is circled in red. Below the search criteria, there are three sections for further narrowing results: 'Strand or Substrand' (with options like Math, Number & Operation, Algebra, etc.), 'Question Types' (with options like All Types, MC: Multiple Choice, etc.), and 'DOK (Depth of Knowledge) Levels' (with options like All DOK Levels, I, II, III). The 'Years' section on the right has 'All Years' selected. At the bottom right, there are 'Search', 'Cancel', and 'Reset' buttons.

4. Once you have completed your selections, select **Search** on the right under **Questions available** to view the list of questions.

This screenshot is identical to the one above, showing the same search criteria and options. However, the 'Search' button, located at the bottom right under the 'Questions available' section, is now circled in red.

After selecting **Search**, the list of questions will appear.

MQT HOME
Search by Subject
Search by Question ID
Help

To view an item, select an item in the table below, and then select the "Show Question" button. If you're using a keyboard to navigate this page, tab into the table. Then, use the arrow keys to navigate the cells. Use the space bar to select an item.

To update the search criteria, select the "Back" link to go back to the Search Options page, and change the search criteria.

Back

Search Results (25):
Subject: **Mathematics**, Grade: **3**, Years: **All**
Content Classifications: All, Types: All, DOK (Depth of Knowledge) Levels: All

Number	Question ID	Description	Strand or Substrand	SSB	Grade	Year	DOK	Type
1	235711	Calculator	Number & Operation	3.1.3.1	03	2019	II	TEX
2	235700	Calculator	Number & Operation	3.1.2.2	03	2018	II	TEX
3	235258	Calculator	Algebra	3.2.1.1	03	2018	II	MC
4	730114	Calculator	Algebra	3.2.2.2	03	2018	III	MC
5	730542	Calculator	Geometry and Measurement	3.3.1.2	03	2018	I	MC
6	231460	Calculator	Geometry and Measurement	3.3.2.2	03	2018	II	MC

Show Question
1 of 25

- At any time, select **Cancel** or **Reset** in the top right corner of the Search Questions page to clear all search criteria parameters and start again.
- To search by question ID, select **Search by Question ID**, type the ID into the box, and select **Search**.

MQT HOME
Search by Question ID
Help

Search Questions

Search by subject and grade below, or [search by question ID](#).

Subject and Grade Search

Subject:
Mathematics
Grade:
☒ Grade 3
☐ Grade 4
☐ Grade 5
☐ Grade 6
☐ Grade 7
☐ Grade 8
☐ Grade 11

Get Question Count
Questions available:

Search
Cancel
Reset

MQT HOME
Search by Subject
Help

Search by Question ID

Question ID:

Search

e.g., 235711 or 432030-3359

View Search Results

- The search results display in a table with the following information.
 - Number:** Consecutive numbering of the questions.
 - Question ID:** MDE-unique identifying number for each question.
 - Description:** For Mathematics, displays whether the question allows the use of a calculator. For Reading and Science, displays the name of the passage or scenario.
 - Strand or Substrand:** The name of the strand or substrand the question is aligned to.
 - SSB:** The numerical standard, strand, and benchmark the question is aligned to.
 - Grade:** The grade the question is aligned to.
 - Year:** The year the question was released.
 - DOK:** Depth of Knowledge level assigned to the question.
 - Type:** Multiple Choice (MC) or Technology Enhanced (TE), including question types such as Constructed Response (CR), Text Extractor (EXT), Graphic Gap Match (GGM), Gap Match (GM), Gap Match Gap Table (GMGT), Hot Spot (HS), Hot Text (HTX), Inline Choice (IC), MATCH, Multiple Response (MR), Match Table Grid (MTG), ORDER, or Test Entry/fill-in-the-blank (TEX).

MQT HOME **Search by Subject** **Search by Question ID** **Help**

To view an item, select an item in the table below, and then select the "Show Question" button. If you're using a keyboard to navigate this page, tab into the table. Then, use the arrow keys to navigate the cells. Use the space bar to select an item.

To update the search criteria, select the "Back" link to go back to the Search Options page, and change the search criteria.

[← Back](#)

Search Results (25): **Subject: Mathematics, Grade: 3, Years: All**
Content Classifications: All, Types: All, DOK (Depth of Knowledge) Levels: All

Number	Question ID	Description	Strand or Substrand	SSB	Grade	Year	DOK	Type
1	235711	Calculator	Number & Operation	3.1.3.1	03	2019	II	TEX
2	235700	Calculator	Number & Operation	3.1.2.2	03	2018	II	TEX
3	235258	Calculator	Algebra	3.2.1.1	03	2018	II	MC
4	730114	Calculator	Algebra	3.2.2.2	03	2018	III	MC
5	730542	Calculator	Geometry and Measurement	3.3.1.2	03	2018	I	MC
6	231460	Calculator	Geometry and Measurement	3.3.2.2	03	2018	II	MC

[Show Question](#) [1 of 25](#)

- Scroll through questions using the arrows at the bottom right of the screen.
- To sort items, select the column headers to reorder data in each column.

Show Questions

1. To view the detail of a question, click **Show Question** in the lower left corner of the search results page.

Show Question

The window will expand to show the **Question**, **Key/Scoring Guide** (question rationales), and **Performance Data** tabs. To hide the question and its tabs again, click **Hide Question**.

2. The **Question** tab presents the question with two additional links that can be selected:
 - Selecting **Attributes** displays the subject, grade, year, content classifications, type, and DOK of the question.
 - Selecting **Answer** displays the correct answer to the question.

Note: Selecting either of these links again hides the **Attributes** and **Answer** information.

Hide Question

Question Key/Scoring Guide Performance Data

Show: Attributes Answer Print

An input-output table is shown.

Input	Output
3	15
5	25
7	35

What is the output number when the input number is 11?

A. 5
B. 40
C. 45
D. 55

3. The **Key/Scoring Guide** tab shows the correct answer to a question and the question rationale.

Hide Question

Question Key/Scoring Guide Performance Data

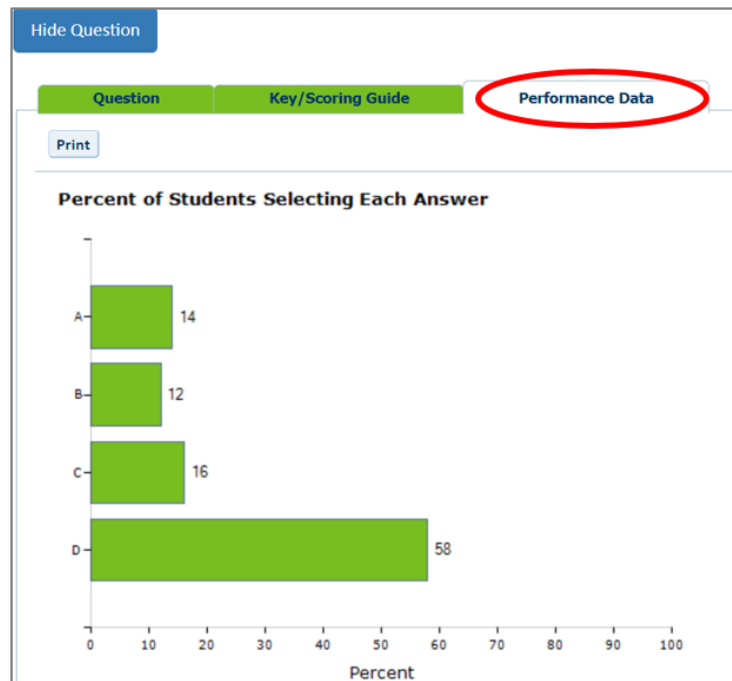
Print

The correct answer is:
D. 55

Solution:

RATIONALE A	Chose the rule multiply by 5.
RATIONALE B	Chose the value for input of $8.5 * 8 = 40$
RATIONALE C	Chose the value for input of $9.5 * 9 = 45$
RATIONALE D	Correct. $5 * 11 = 55$

4. The **Performance Data** tab shows the percent of Minnesota students who selected each answer.



Print Questions

To print the question and its attributes, select **Print**.

Hide Question

Question Key/Scoring Guide Performance Data

Show: Attributes Answer **Print**